

North Carolina: Annual Report of Accomplishments and Impacts July 1, 2010 – June 30, 2011

Fundamental Program/OHI

Sheila Higgins, Principal Investigator, (919) 707-5940, sheila.higgins@dhhs.nc.gov

Tanya Barros, Project Coordinator/Epidemiologist, (919) 707-5904, tanya.barros@dhhs.nc.gov

Major Accomplishments and Outputs

Program objectives:

- Collect and analyze occupational illness and injury data using existing data sets (OHIs)
- Compile and disseminate data to occupational health stakeholders and partners
- Identify opportunities for interventions to prevent work-related injuries and illnesses
- Establish and maintain an advisory committee
- Strengthen state network of key state partners that can use data and support program goals
- Assess gaps in program expertise and resources and develop strategies to eliminate gaps

Occupational Health Indicators

N.C. completed 18 OHIs and the data was submitted to CSTE in June 2011. Three other conditions of interest to N.C. are farm injury, work-related heat illness, and public employees. Data sources have been identified for the first two conditions. The new staff epidemiologist is now trained and using electronic emergency department data (from all N.C. hospitals) to conduct ongoing surveillance for occupational heat-related illness and injury from May – September. Occupational surveillance staff are collaborating with climate change staff to post relevant trend data on a Division website created for heat-related illness in N.C. The website also contains a fact sheet on prevention of heat-related illness for employees and employers. Potential outcomes include trend data that can be used to establish surveillance and intervention priorities. Intermediate outcomes include development of the first occupational health objective included in the Healthy North Carolina 2020 Objectives as coordinated by the N.C. Institute of Medicine. Indicator fatality rate data was used to support this objective: *Reduce the mortality rate from work-related injuries.*

Data Dissemination and Publication

The program completed an annual statewide data summary report containing a subset of the OHIs entitled *Occupational Health Trends Report, North Carolina, 2003 – 2008* found at <http://www.epi.state.nc.us/epi/oii/pdf/OccupationalTrends2010.pdf>. Indicators included: Employment Demographics; Non-fatal Work-Related Injuries and Illnesses Reported by Employers; Work-Related Hospitalizations; Fatal Work-Related Injuries; Percentage of Workers Employed in Industries with High Risk for Occupational Morbidity; and, Economic costs of Occupational Injuries and Illnesses. Trend analysis was done for most indicators using rates and breakouts were done separately to better describe factors contributing to occupational injury and death. Breakouts included data elements like sex, age, occupation, industry, event or exposure. Future reports will contain all indicators that data is available for. Excerpts from this report are given to the State Health Director for the annual Public Health Report to the N.C. Medical Society. The report is posted to the Division website and shared at advisory group meetings. Wider dissemination is pending. Indicator data was also utilized to contribute to an injury forum in an issue of the North Carolina Medical Journal. This journal is read by physicians, professionals in many other health care fields, by policymakers, by academic researchers and their students, and by a large number of interested lay persons.

The article was entitled *Castillo, D., & Higgins S. (2010). Occupational injury in North Carolina. North Carolina Medical Journal. Nov/Dec 2010; 71(6): 569-57.* Potential outcomes of these efforts include raising awareness of the purpose and mission of the Occupational Surveillance Unit (OSU) NCDPH and educating stakeholders about occupational injury and illness trends in N.C.

Identification of Prevention and Intervention Opportunities

Prevention priorities are established based on indicator data to-date. Further detailed analysis is being conducted for transportation-related, heat-related, and agriculture-related injuries & fatalities. To help N.C. counties impact the Healthy North Carolina 2020 objective *Reduce the mortality rate from work-related injuries*, evidenced based strategies pertaining to tractor and vehicle safety on farms were developed. To measure success, county-level fatality data collection is being discussed with local Department of Labor CFOI representatives.

The OSU wrote the script and coached a Spanish-speaking staff member on prevention of heat-related injuries for the Hispanic Community as filmed and televised by Univision. Heat surveillance activities as discussed will likely produce specific areas to target for further intervention.

In an effort to build surveillance capacity in unfunded states and strengthen regional collaboration on OH issues, the PI became a co-coordinator of the new SouthON initiative (Southern States Occupational Network). Recruitment of member states is finished, a list serve has been developed, and a meeting is being planned for late 2011. This is modeled after WestON (goals: networking, collaboration on crosscutting issues, resource sharing, and capacity building by introducing OHIs).

Potential and intermediate outcomes of these efforts include: clearer identification of vulnerable work groups & injury risk factors, development of targeted interventions that have impact, and increased surveillance activity in previously inactive states of the U.S.

Establish and Maintain an Advisory Committee

A fully functional, local advisory committee has been established and 12 members have been selected as the core group. The first meeting was June, 2011. Members consist of academia, regulatory, safety education, the local OSHERC, occupational health nursing, public health epidemiology, and specialty groups to include the State Safety Manager, the East Carolina University Agromedicine Institute, and the Carolina Collaborative for Research on Work and Health (CCRWH) at UNC Chapel Hill. Goals: Strengthen relationships and collaboration with OH agency partners; share surveillance data with those who can use it and make an impact; discuss OH issues important to state. This group will meet twice a year. As a result of the first Advisory Group meeting, the NC Chapter of the National Safety Council (a member of the advisory group) incorporated an ABLES presentation into regional training it provides. In addition, a North Carolina Industrial Commission (NCIC) representative (also a member) agreed to collaborate on finding ways to improve data capture in the NCIC electronic database. A relationship was started with the State Safety Manager for potential collaboration on Public employees. The OSU will request to be added to the State Steering Committee for Safety and Health Year II of the grant. CCRWH requested OSU present data at a quarterly meeting. Potential and intermediate outcomes include development of partnerships with agencies that can impact safety in the workplace.

Assess Gaps in Program Expertise and Resources and Develop Strategies to Eliminate Gaps

A new full-time epidemiologist is in place as of June 2011 and is coordinating most OH projects. Epidemiology method improvements are being made. Data sources are being evaluated for utility, strengths and limitations.

Priority surveillance activities have been identified and begun. Areas where intervention is likely needed have been identified. Necessary training and resources are being obtained to strengthen ability to provide services. Potential outcomes include ability to complete basic occupational surveillance as outlined in NIOSH guidelines.

Publications

Lee SJ, Mulay P, Diebolt-Brown B, Lackovic M, Mehler L, Beckman J, Waltz J, Prado JB, Mitchell Y, Higgins SA, Schwartz A, Calvert GM. Acute Illnesses Associated with Exposure to Fipronil — Surveillance Data from 11 States in the United States, 2001–2007. *Clinical Toxicol* 2010; 48:737-44.

Castillo, D., & Higgins S. (2010). Occupational injury in North Carolina. *North Carolina Medical Journal*. Nov/Dec 2010; 71(6): 569-573.

N.C Institute of Medicine (2011). *Healthy North Carolina 2020: A Better State of Health*. Morrisville, NC: North Carolina Institute of Medicine.

Hudson N. et al (2011) Acute illnesses associated with insecticides used to control bed bugs— Six States, 2005-2010. *MMWR* (Submitted).
